

TWO NEW SPECIES OF HUERNIA FROM SOUTH-WESTERN ARABIA

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(With Plates IX and X)

Huernia marnieriana Lavranos, nov. sp., affinis *H. concinnae* N. E. Brown sed corolla valde brevi, corona albida, exteriore convexula lobis apice bifidis, interiore punicea differt.

Caules erecti, pentagoni, glauco-virides, brunnei maculati, 4–6 cm. longi, 14–17 mm. crassi dentibus exclusis; dentes conici compressi, acutissimi, tenuis 8 mm. longi, patuli; flores 2–3 aggregati, ex basi caulium juvenium producti; bracteae lineares, acutae, 5 mm. longae; pedicelli teretes, glabri, 8–10 mm. longi, 1.5 mm. diam.; sepala linearea acuta, 6–8 mm. longa, glabra; coralla rotata sed brevissime campanulata, semper planiuscula, 33 mm. diametro, 2–5 mm. longa, extus lutescens, glabra, intus anguste rubro-marginata, lutescens, tuberculis rubris, conicis ubique induta; tubus 2–5 mm. longus, basi puniceus; lobi deltoidei, acuti, basi 12 mm. lati, 7–10 mm. longi; lobi intermedii breves, tenuis 1 mm. longi, saepe absentes; corona exterior albescens, basi tubi adpressa, convexa 4.5–5.0 mm. diametro, lobis exterioribus latioribus quam longi, apice breviter bifido, puniceo; coronae interioris lobi 2.5 mm. alti, pallide punicei, supra antheras incumbentes et conniventes, dorso gibbosi.

TYPE LOCALITY. Audhali Plateau, Southern Arabian Federation, on the rocky Western slopes of the Wadi Salul, some 3 miles S.S.W. of the village of Mukeiras, lat. 13° 55' 30" N., long. 45° 40' E., alt. appr. 2,050 m., Lavranos 1958 (KEW, Holotype) fl. Pretoria 5 January, 1963. Also Lavranos 1859 from the same locality. Also from the middle slopes of the Aqaba Thirah, Audhali country N.W. of Lodar (Lavranos 1788).

Stems erect, 5-angled, glaucous-green mottled brown, 4–6 cm. long, 14–17 mm. diam. excluding the teeth; teeth conical rather, compressed, very acute up to 8 mm. long, spreading.

Flowers 2–3 from the base of young stems developed successively.

Bracts linear, acute, 5 mm. long.

Pedice 8–10 mm. long, terete, glabrous 1.5 mm. thick.

Sepals linear, acuminate, 6–8 mm. long, light green, glabrous.

Corolla rather fleshy, shallow, broadly saucer-shaped, 33 mm. diam., 2–5 mm. long; *outer surface* cream in colour becoming brownish towards the apices of the lobes with five prominent nerves at the back of each lobe; *inner surface* whitish but pink at base of tube, with a narrow red margin, covered

throughout with conical red tubercles which are smaller towards the apices of the lobes; *tube* very shallow 2—4 mm. long; *lobes* broadly deltoid, acute, spreading, 12 mm. broad at base, 7—10 mm. long; *intermediate lobes* 1 mm. long, frequently absent.

Outer corona whitish, adpressed against the corolla-tube, convex, 4·5—5·0 mm. diam., the lobes broader than long, shallowly bifid and pink at their apices.

Inner corona lobes 2·5 mm. high, very pale pink, incumbent upon the anthers and not produced above them, with a pronounced gibbosity at the base of their deltoid, rather acute apices.

This peculiar species was one of several collections of *Huernia* made by the author at various points in S.W. Arabia during a short botanical reconnaissance of that region in August, 1962.

It was found growing as isolated individuals on the Kor al Audhilla (Audhali plateau) of the Western Aden Protectorate, near the Yemeni border, on the steep rocky slopes of the Wadi Salul, in association with *Euphorbia balsamifera* Ait., *Adenium obesum* (Forsk.) R. & S., *Cotyledon barbeyi* Schweinf., *Acacia* spp., *Coleus barbatus* (Andr) Benth. etc., in an area which has never received the attention of botanists and which appears to receive an average rainfall of some 300 mm. The climate of the high plateau is generally temperate and light frosts occur in December, January and February.

Our species is clearly related most closely to *H. concinna* N. E. Br. from Somaliland but differs therefrom by the very shallow corolla which is almost flat. The corolla of our species is covered by red, conical, wart-like papillae whereas in its closest ally the papillae are bristle-like. The outer corona is whitish, characteristically convex, whereas in *H. concinna* it is dark purple brown. The inner corona lobes are light pink in colour whereas in the older species they are yellow.

H. marnieri, in habit and the form of its stems is very close indeed to the species and varieties of the *macrocarpa* section of the genus, while its coronal structure places it in White and Sloane's *macrocarpa-brevirostris* group.

The structure of the corolla in *H. marnieri* is rather abnormal. There is no trace of an annulus as is the case in all such members of the genus as have a saucer-shaped corolla. The intermediate corolla-lobes, in the specimens collected on the Kor al Audhilla, are entirely absent. This character, however, is not constant since in the plants collected on the Aqaba Thirah these lobes are well developed, though rather short.

Attention is also drawn to the peculiar conical gibbosity which arises at the point where the inner corona lobes bend over the staminal column, a feature reminiscent of the corona of *Duvalia sulcata* N. E. Br. In fact, were it not for the distinctly lobed outer corona, it would be difficult to decide whether to place



PLATE IX—FIG. 1.
Huernia marnieriana Lavranos. The type plant, actual size.
 Photograph: Division of Botany, Pretoria.

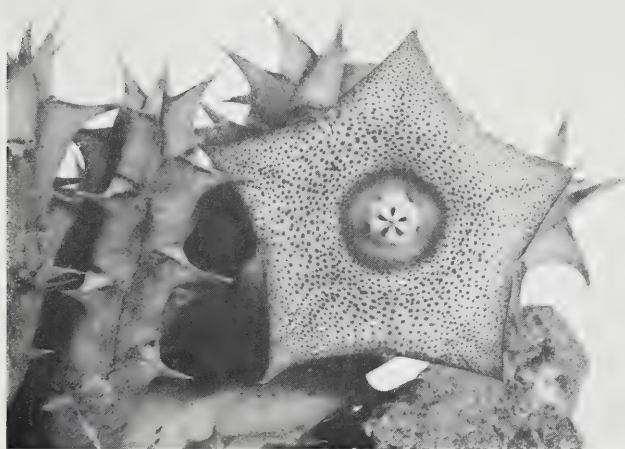


PLATE IX—FIG. 2.
Huernia marnieriana Lavranos, x2.
 Photograph: Division of Botany, Pretoria.



PLATE X—FIG. 1.
Huernia hadhramautica Lavranos nov. sp. The type plant, actual size.
 Photograph: L. Louis.

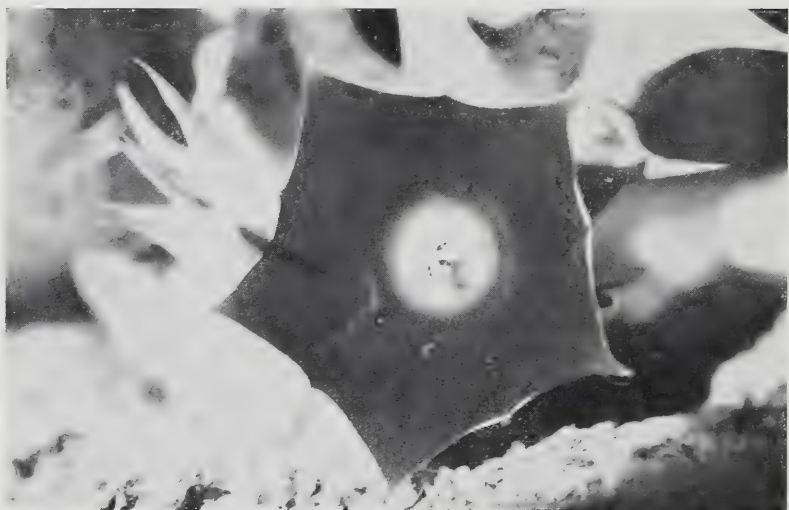


PLATE X—FIG. 2.
Huernia hadhramautica Lavranos nov. sp. appr. x2.5 natural size.
 Photograph: L. Louis.

the form of our species in which the intermediate corolla lobes are absent in *Huernia* R. Br. or in *Duvalia* Haw.

The plant here figured was sent by the author to the Division of Botany, Pretoria, where it first flowered on 5 January, 1963 when the present description was drawn up. This description had to be somewhat modified when a plant from the Aqaba Thirah (Lavranos 1788) flowered on 25 January, 1963 and presented certain characters differing somewhat from those of the type-plant.

This species is named in honour of M. J. Marnier-Lapostolle of "Les Cèdres", St. Jean-Cap Ferrat, France, as a token of appreciation for his generous help, which assisted me in my exploration of South Western Arabia, and for his love of the Stapeliae.

Huernia hadhramautica Lavranos, nov. sp., affinis *H. macrocarpae* Sprenger, sed corona exteriore convexa, conica, albescente differt.

Caules erecti, robusti, pentagoni 4–6 cm. longi, 18–22 mm. crassi dentibus exclusis, glabri, canescentes, brunnei mucalati; dentes prominentes, compressi, acuti, tenus 12 mm. longi, patuli; flores, 1–3 ex basi caulium juvenum producti; bractae lineares 1 mm. longae; pedicelli teretes, glabri, brunneo-virides, 4–5 mm. longi, 1.5 mm. crassi; sepala linearea, acuta, trinervia, carinata, minute puberula, 7–9 mm. longa; corolla late campanulata, 10 mm. longa, ca. 25 mm. lata inter apices loborum, extus punicea, dense sed minute papillata, intus fusca rubropurpurea, papillis parvis conicis induta; basis tubi punicea, glabra; lobi late deltoidei, acuti, basi ca. 12 mm. lati, 6 mm. longi, extus 7-nervii; lobi intermediarii 1 mm. longi; corona exterior albescens, basi tubi adpressa, obtuse conica, 5 mm. lata, 3 mm. alta, lobis apice rotundatis, sectione convexis; coronae interioris lobi albi, 2 mm. alti, ex apice coronae exterioris producti, primum erecti, leviter divergentes, deinde supra antheras incumbentes sed non excedentes, conniventes, gibbosi, apice punicei.

TYPE LOCALITY. Southern Arabia, Hadhramaut in rocky ravines at Mola Matr. lat 14° 47' N., long. 48° 48' E. North of Mukalla, on the main road to the Wadi Doan, est. altitude 1800 metres, Lavranos 1935 (KEW, Holotype) fl. Johannesburg 8th January, 1963.

Stems robust, 5-angled, ascending-erect, 4–6 cm. long, 22 mm. thick excluding teeth, glabrous, greyish mottled with brown; teeth very stout, elliptical in section, 12 mm. long, spreading, very acute.

Flowers 1–3 from the base of young stems, developed successively.

Bracts linear, 1 mm. long.

Pedicel terete, glabrous, purple-green, 4–5 mm. long, 1.5 mm. diam.

Sepals linear-acute, 3-nerved, carinate, minutely puberulous, 7–9 mm. long.

Corolla broadly campanulate, 10 mm. long, appr. 25 mm. diam. between

apices of lobes; *outer surface* cream with a pink tinge, densely covered with minute conical papillae; *inner surface* dark purple-red, covered with small conical papillae which are absent from the pink base of the tube; *lobes* broadly deltoid, acute, ca. 12 mm. broad at base, 6 mm. long, outside 7-nerved; intermediate lobes 1 mm. long.

Outer corona pinkish-white, adpressed against the base of the tube, rather obtusely conical, 5 mm. diam., 3 mm. high; lobes rounded at their apices, convex in section, separated from one another by a deep groove.

Inner corona lobes pure white, 2 mm. high, arising from the apex of the outer corona, at first erect, slightly divergent, then incumbent upon the anthers but not produced above them, connivent, gibbous, the apices pink.

This very beautiful species is closely allied to *H. macrocarpa* Spreng. from Eritrea, one of the varieties of which, var. *arabica* (N. E. Br.) White et Sloane, was collected in 1889 by Schweinfurth on Jebel Bura which is along the Western escarpment of the Yemen. Our plant differs, however, in its rather remarkable outer corona which is not flat but has the form of a 5-grooved cone with rounded lobes. The inner corona lobes arise from the grooves at the apex of this cone. This coronal structure is very unusual.

By its texture, the corolla of *H. hadhramautica* is strongly reminiscent of *H. keniensis* R. E. Fries. The dark colour of the corolla, which contrasts with the light-coloured base of the tube, reminds one of *H. occulata* Hook. f. and *H. similis* N. E. Br., both from Southern Angola, but the form and colour of the outer corona serve to distinguish our species.

H. hadhramautica marks the North-easterly limit of the genus as known at present. It is an altogether charming species with lovely flowers. It was found growing among limestone boulders on rocky slopes of minor dry water-courses tributary to the upper Wadi Himem near Mola Matr in the Hadhramaut. This locality is at an altitude of some 1800 m. at the southern edge of the Hadhrami Jol (high plateau), at the foot of the Kor Seiban which rises to over 2150 m. immediately to the North. Mola Matr means "The God of Rain" and while, as the name implies, it is situated in one of the rainiest areas of the Hadhramaut, it is still very dry and may receive an average of some 200 mm. of rain per annum, although this figure is purely conjectural as no rainfall data are available. The rainfall is mainly in the form of torrential thunder-showers. While we were in this area, on 21 and 22 August, 1962, thunderclouds piled up in the afternoon to the North of the Kor Seiban, but no rain fell where we were.

Our species was found growing in association with *Acacia asak* (Forsk.) Willd., *A. tortilis* (Forsk.) Hayne, *Euphorbia balsamifera* Ait. (syn. *E. adenensis* Defl.), *E. phillipsiae* N. E. Br., *Kalanchoe teretifolia* Defl., *Dorstenia foetida* Forsk., *Tarchonanthus camphoratus* L., *Euryops arabicus* Steud., *Aloe inermis* Forsk., various Acanthaceae, Stapelieae and others.

Living plants were sent to Johannesburg where one of them flowered on 8 January, 1963, when the present description was prepared and photographs taken.

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